REMARKS

The Applicant wishes to thank the Patent Examiner for the extremely thorough Office Action rendered on claims of the present application. The Applicant has reviewed all of the comments by the Examiner and all of the references cited by the Examiner and in response thereto has deleted all claims as originally filed and now submits a more concise and restricted listing of Claims numbering 67 to 85 that more particularly and distinctly point out the subject matter of the invention. These claims are substantially modified from the original claims as filed and have been amended in order to distinguish over all prior art noted by the Examiner or knowhow to the Applicant. Also the Applicant has adopted the specific language suggestions detailed by the Examiner in the above Office Action and those suggestions are respectfully appreciated.

Applicant hereby confirms the election of the invention set forth in Claims 1 to 41 and 55. Applicant withdraws claims 42 to 54 and 56 to 66 for inclusion in a divisional application for possible filing at a future date while the present application is still pending. The withdrawing of claims 42-54 and 56 to 66 is hereby formally made with traverse.

Note that the Applicant has modified the abstract of the disclosure as required by the Examiner in paragraph 9, page 4 of the above identified Office Action. Applicant has also canceled claims 1 to 41 and 55 and submitted new claims for consideration by the Examiner. Note that the number of total claims now pending and the number of independent claims now pending is less than the number of total claims and the number of independent claims as included in the original filing and, as such, no added government filing fee is required for consideration of the newly submitted claims.

It should be appreciated that the present invention relates specifically to nanocomposite polymer blends prepared for the purpose of producing tubing having unexpectedly enhanced mechanical properties that are achieved by forming unique combinations of polymers and nanocomposite materials. The key

focus of our invention is the relationship between the chemistry and crystalline form of the two materials being blending together. In accordance with this invention new discoveries have been made of unique properties of these blends that go beyond those of a traditional nanocomposites or traditional block copolyamide technology.

Most particularly, this invention, as set forth in the product claims now presented, involves three unique material combinations which are detailed specifically in the independent claims.

1. Blending a Nylon 12 nanocomposite with a Nylon 12 based polyether copolymer that produced novel combinations of modulus and ductility.

2. Blending a Nylon 6 nanocomposite with a Nylon 12 Nanocomposite with emphasis on higher modulus and better dimensional stability than the Nylon 6 nanocomposite extruded alone.

3. Blending a Nylon 6 nanocomposite with a Nylon 12 based polyether copolymer nanocomposite with similar results to point number 2.

It should be specifically noted that when we blended a Nylon 11 nanocomposite material with a Nylon 12 based polyether copolymer that we did not achieve the same optimum properties as described in point one above. Pertaining to points 2 and 3 above, we achieved modulus values that were not additive, i.e. by blending the Nylon 6 nanocomposite (a much higher modulus material than a Nylon 12 nanocomposite) with the Nylon 12 nanocomposite we did not observe the proportionate drop in modulus that would have been expected. Concomitantly, we observed an improvement in our ability to control wall thickness stability known in our industry as improved concentricity, more commonly known as improved dimensional stability.

This invention is applicable to produce tubing particularly usable in various medical applications such as catheters and balloons. These devices are significantly enhanced because they are formed from unique blends of materials having enhanced mechanical properties such as a good balance between stiffness and flexibility or, more specifically, improved surface properties such as lubricity and a reduction in the propensity to retain dirt and other contaminants. Such tubing can also be used in many other applications such as medical diagnostic equipment, wiring conduits, or any other application for tubing where the enhanced mechanical properties are found to be valuable. The blending itself can be performed using conventional pellet blending followed by extruding of the tubing or can be precompounded through a conventional compounding extruder.

The Examiner is hereby authorized to charge the one month extension fee required for the filing of this Amendment in the amount of $55 as well as any other government fees that need be filed to maintain this application in pending status to the US Patent Office Deposit Account Number 193750 of the below attorney. In order to expedite prosecution of this patent application, the Examiner is encouraged to telephone the below attorney to resolve any outstanding issues.

Respectfully submitted

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

on July 8, 2003

John J. Kane